A study of hypochondriasis and depression among the youth following drugs and substance addiction

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Abstract

The objective of this study was to investigate the state of mental health disorder in drugs and substance addicted youth in National Capital Region (NCR) for hypochondriasis and depression of different geographical regions in National Capital Region (NCR) of India. Another purpose of the study was to find out the significant difference in comparison of mental health disorders among drugs and substance addicted youth in hypochondriasis and depression from East, West, North, South and Central National Capital Region (NCR) of India.500 subjects for the study were selected from the East, West, North, South, Central region of NCR, 100 from each region of age range from 18 to 25 years. Minnesota multiphasic personality inventory used as criterion measure. To find out significant difference of psychological characteristics among national capitalregionrehabs of different geographical regions in NCR of India, the analysis of variance was used. The result reveals the analysis of variance that there was significant (p>.05)forhypochondriasis and depression among the group east, west, north, south, central region of NCR in drugs and substance addicted youth were significant (p>.05) significant difference in comparison of mental health disorders among drugs and substance addicted youth in hypochondriasis and depression from East, West, North, South and Central National Capital Region (NCR).

Keywords: Addiction, Psychology, Substance abuse, mental health disorders, personality inventory, psychopathology, youth.

INTRODUCTION

Mental health is a state of wellbeing in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community (WHO).

Drug abuse or substance abuse refers to the use of certain chemicals for the purpose of creating pleasurable effects on the brain (Dr. Ananya Mandal, 2023).

Psychology is the logical investigation of the brain and conduct, as indicated by the American Psychological Association. Psychology is a multifaceted discipline and consolidates many sub-fields of concentrate such areas as human new development, sports, prosperity, clinical, social approach to acting and mental cycles.

The National Capital Region (NCR) is the designation for a conurbation or metropolitan area in India. It encompasses the entire National Capital Territory of Delhi, including New Delhi and urban areas surrounding it in neighboring states of Haryana, Uttar Pradesh, and Rajasthan(thehansindia.com,2016).

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Substance abuse is a pattern of compulsive substance use marked by recurrent significant social, occupational, legal, or interpersonal adverse consequences, such as repeated absences from work or school, arrests, and marital difficulties. (APA dictionary of psychology)

Addiction is a state of psychological or physical dependence (or both) on the use of alcohol or other drugs. The term is often used as an equivalent term for substance dependence and sometimes applied to behavioral disorders, such as sexual, internet, and gambling addictions.(APA dictionary of psychology)

METHODOLOGY

Subject for the study were 500 drugs and substance addicted youth in National Capital Range (NCR). 100 subjects were selected from East NCR (Ghaziabad, G. B. Nagar, Hapur & Bulandshahr District), 100 subjects were selected from West NCR (Jhajjar, Rohtak, Rewari & Charkhi Dadri District), 100 subjects were selected from North NCR (Sonipat, Bhagpat, Meerut & Muzaffarnagar District), 100 Subjects were selected from South NCR (Gurugram, Faridabad, Palwal & Nuh District) and while another 100 subjects were selected from Delhi. The age level of subjects ranged from 18 to 25 years. All the subjects were the residents of National Capital Range (NCR) of India the analysis of variance was used. The required data for the research was collected by the Minnesota multiphasic personality inventory (Personality inventory, psychopathology). The level of significance was set at .05 levels.

FINDINGS OF THE STUDY

Hypochondriasis:

To find outhypochondriasis among the means of East, West, North, South and Central National Capital Region (NCR) drugs and substance addicted youth, analysis of variance statistics was used and presented in table-1.

TABLE-01

Analysis of variance in hypochondriasis among the means of East, West, North, South and Central National Capital Region (NCR) drugs and substance addicted youth

Source of Variance	d.f	SS	MSS	F-ratio
Between Group	4	4756.55	1189.14	47.780*
Within Group	495	12319.36	24.89	

*Insignificant at .05 level

F-Value required to be significant at .05 (4, 495) = 2.389

The value shown in table-1 clearly indicates that the F-Value calculated was much higher than the required value to be the significant. Further the mean difference among East, West, North, South and Central National Capital Region (NCR) drugs and substance addicted youth in relation to their hypochondriasis levels.



The scores are also illustrated in the figure-I

Figure-I

Depression:

To find outdepression among the means of East, West, North, South and Central National Capital Region (NCR) drugs and substance addicted youth, analysis of variance statistics was used and presented in table-2.

TABLE-02

Analysis of variance in depression among the means of East, West, North, South and Central National Capital Region (NCR) drugs and substance addicted youth

Source of Variance	d.f	SS	MSS	F-ratio
Between Group	4	3507.37	876.84	49.192*
Within Group	495	8823.28	17.83	

*Insignificant at .05 level

F-Value required to be significant at .05 (4, 495) = 2.389

The value shown in table-2 clearly indicates that the F-Value calculated was much higher than the required value to be the significant. Further the mean difference among East, West, North, South and Central National Capital Region (NCR) drugs and substance addicted youth in relation to their depression levels.

The scores are also illustrated in the figure-II



Figure-II

TABLE-03

Comparison of hypochondriasis among the means of East, West, North, South and Central National Capital Region (NCR) drugs and substance addicted youth

East	West	North	South	Central	M.D.	C.D.
70.39	68.85				1.54	
70.39		61.74			8.65	
70.39			66.41		3.99	
70.39				68.19	2.2	
	68.85	61.74			7.11	1.38*
	68.85		66.41		2.44	
	68.85			68.19	0.66	
		61.74	66.41		-4.67	
		61.74		68.19	-6.45	
			66.41	68.19	-1.78	

*Significant at .05 level

*F-Value required to be significant at .05 (4, 495) = 2.389

The post hoc test was used to compare hypochondriasis among the means of East, West, North, South and Central National Capital Region (NCR) drugs and substance addicted youth. Where it has clearly revealed the significant difference was found between East and West National Capital Region (NCR) drugs and substance addicted youth, East and North National Capital Region (NCR) drugs and substance addicted youth, East and South National Capital Region (NCR) drugs and substance addicted youth, East and Center National Capital Region (NCR) drugs and substance addicted youth, West and North National Capital Region (NCR) drugs and substance addicted youth, West and North National Capital Region (NCR) drugs and substance addicted youth, West and South National Capital Region (NCR) drugs and substance addicted youth, West and South National Capital Region (NCR) drugs and substance addicted youth, North and South National Capital Region (NCR) drugs and substance addicted

youth, North and Central National Capital Region (NCR) drugs and substance addicted youth and South and Center National Capital Region (NCR) drugs and substance addicted youth, where the mean difference was found higher than critical difference. Where it has clearly revealed the insignificant difference was found between West and Center National Capital Region (NCR) drugs and substance addicted youth, where the mean difference was found lower than critical difference. The scores are also illustrated in the figure-III **Figure-III**



TABLE-04

Comparison of depression among the means of East, West, North, South and Central National Capital Region (NCR) drugs and substance addicted youth

East	West	North	South	Central	M.D.	C.D.
68.33	62.30				6.03	
68.33		67.93			.4	
68.33			63.15		5.18	
68.33				68.03	.3	
	62.30	67.93			-5.63	1.170*
	62.30		63.15		85	
	62.30			68.03	-5.73	
		67.93	63.15		4.78	
		67.93		68.03	1	
			63.15	68.03	-4.88	

*Significant at .05 level

*F-Value required to be significant at 05 (4, 495) = 2.389

The post hoc test was used to compare depression among the means of East, West, North, South and Central National Capital Region (NCR) drugs and substance addicted youth. Where it has clearly revealed the significant difference was found between East and West National Capital Region (NCR) drugs and substance addicted youth, East and South National Capital Region (NCR) drugs and substance addicted youth, West and North National Capital Region (NCR) drugs and substance addicted youth, West and Central National Capital Region (NCR) drugs and substance addicted youth, North and South National Capital Region (NCR) drugs and substance addicted youth and South and Central National Capital Region (NCR) drugs and substance addicted youth, where the mean difference was found higher than critical difference. Where it has clearly revealed the insignificant difference was found between East and North National Capital Region (NCR) drugs and substance addicted youth, East and Central National Capital Region (NCR) drugs and substance addicted youth, West and South National Capital Region (NCR) drugs and substance addicted youth and North and Central National Capital Region (NCR) drugs and substance addicted youth, where the mean difference was found lower than critical difference The scores are also illustrated in the figure-IV



Figure- IV

DISCUSSION OF THE RESULTS

The present investigation was designed to know the mental health disorders among the youth following drug and substance addiction in Delhi and the National Capital Region (NCR). The purpose of this study is many-fold and reveals some specific differences among the NCR youth. Though the research scholar did not tend to explore the personal life of the youth, some of the facts could not be unattended; hence, they found it necessary to know the mental health disorders among the youth following drugs and substance addiction in Delhi National Capital Region. The questionnaire or inventory used for the purpose helped to know the significant difference in youth following drugs

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and substance addiction in the Delhi and National Capital Region of India (NCR). Before getting to the conclusion of the study, it should be understood. Their positive contribution certainly helps any society or country grow with the proper ratio.

In this present study, there is an indication that young individuals engaged in substance addiction may be more prone to experiencing symptoms of hypochondriasis. The findings of the present study align with previous research, as indicated by **Scarella et al.(2016)**; found the connection between hypochondriasis and various psychological problems, **Bailer et al.,(2016)**; found the hypochondriasis and health anxiety are conceptualized and classified according to DSM-5, which is a widely used diagnostic manual in the field of mental health,**Sirri et al.,(2015)**; found the relationship between adolescents hypochondriacal fears and beliefs and various factors such as demographic features, psychological distress, well- being, and health related behaviors,**Prakash Sathya,(2013)**; found the case study involving hypochondriasis coupled with dependence on dexamethasone and pheniramine. The case likely describes an individual exhibiting hypochondriasis, a condition characterized by excessive worry about having a serious medical illness, **Mataix-Cols et al.,(2023)**; found the all-cause mortality and mortality related to specific causes in individuals diagnosed with hypochondriasis.

In this present study, there is an indication that young individuals engaged in substance addiction may be more prone to experiencing symptoms of depression. The findings of the present study align with previous research, as indicated by Esmaeelzadeh et al.,(2018); found the relationship between depression, anxiety, and substance use among post-secondary students in Canada the study likely investigates the extent of associations between depression, anxiety, and the use of substances among students in higher education. It may examine the prevalence and patterns of substance use in the context of mental health issues such as depression and anxiety, Carmo et al., (2020); found theconnections among substance use, anxiety, depression, and stress specifically within the context of public university workers. The study explores the prevalence and relationships between substance use, as well as the mental health factors of anxiety, depression, and stress, among employees of public universities, Garey et al., (2020); found the temporal relationships and directional effects between anxiety, depressive disorders, and substance use based on the findings of recent research. The goal may be to understand the dynamics of how these mental health conditions and substance use interact over time, shedding light on whether one condition precedes or influences the onset of the others, Brenner et al., (2019); found the relationship between treatmentresistant depression and the risk of developing substance use disorders.

BIBLOGRAPHY

Books

- Bloomquist, M. L. & Schnell, S. V. (2002). Helping children with aggression and conduct problems. New York: Guilford.
- Gropper B. A. & National Institute of Justice (U.S.). (1985). Probing the links between drugs and crime. U.S. Department of Justice National Institute of Justice.
- Gropper, Bernard A.: *Developing drug testing by hair analysis* (U.S. Dept. of Justice, Office of Justice Programs, National Institute of Justice, 1993), also by Judy A. Reardon and National Institute of Justice (U.S.)

Journals and periodicals

"Alcohol Metabolism." *National Institute on Alcohol Abuse and Alcoholism*, U.S. Department of Health and Human Services, www.niaaa.nih.gov/publications/alcohol-metabolism. Accessed 8 Nov. 2023.

"Alcohol Use during Pregnancy." *Centers for Disease Control and Prevention*, Centers for Disease Control and Prevention, 3 Oct. 2023, www.cdc.gov/ncbddd/fasd/alcoholuse.html#:~:text=There%20is%20no%20known%20safe,exposed%20to%20alcoho 1%20before%20birth.

Baingana, F., al Absi, M., Becker A. &et al. (2015), "Global research challenges and opportunities for mental health and substance-use disorders", Nature, 527, pp. S172–S177 (2015). https://doi.org/10.1038/nature16032

Bailer, J., Kerstner, T., Witthöft, M., Diener, C., Mier, D., &Rist, F. (2016). Health anxiety and hypochondriasis in the light of DSM-5. *Anxiety, stress, and coping*, 29(2), 219–239. https://doi.org/10.1080/10615806.2015.1036243

- Blandino, Alberto, et al. "Driving under the influence of drugs: Correlation between blood psychoactive drug concentrations and cognitive impairment. A narrative review taking into account forensic issues." *Forensic Science International: Synergy*, vol. 4, 2022, p. 100224, https://doi.org/10.1016/j.fsisyn.2022.100224.
- Brenner, P., Brandt, L., Li, G., DiBernardo, A., Bodén, R., &Reutfors, J. (2019). Treatment-resistant depression as risk factor for substance use disorders-a nationwide register-based cohort study. *Addiction (Abingdon, England)*, 114(7), 1274– 1282. https://doi.org/10.1111/add.14596

Borrell-Carrio, F., Suchman, A.L., Epstein, R.M., 2004. The bio- psychosocial model 25 years later: principles, practice, and scien- tific inquiry. Annals of Family Medicine 2, 576–582.

Carmo, D. R. P. D., Siqueira, D. F., Mello, A. L., Freitas, E. O., Terra, M. G., Cattani, A. N., &Pillon, S. C. (2020). Relationships between substance use, anxiety, depression and stress by public university workers. *Revistabrasileira de enfermagem*, *73Suppl 1*(Suppl 1), e20190839. https://doi.org/10.1590/0034-7167-2019-0839

Carol A. Schubert, Edward P. Mulvey & CristieGlasheen (2011), "Influence of Mental Health and Substance Use Problems and Criminogenic Risk on Outcomes in Serious Juvenile Offenders", Journal of the American Academy of Child and Adolescent Psychiatry, Vol. 50 No. 9, pp. 925-937.

- Caspi A., Begg D., Dickson N. & et al. (1997), "Personality differences predict healthrisk behaviors in young adulthood: Evidence from a longitudinal study", Journal of Personality and Social Psychology, Vol. 73 No. 5, pp. 1052–1063.
- *Cessation* (Cambridge Studies on Child and Adolescent Health, pp. 3-17). Cambridge: Cambridge University Press. doi:10.1017/CBO9780511500039.002

Chikritzhs T, Livingston M. Alcohol and the Risk of Injury. Nutrients. 2021 Aug 13;13(8):2777. doi: 10.3390/nu13082777. PMID: 34444939; PMCID: PMC8401155. Chung T, Creswell KG, Bachrach R, Clark DB, Martin CS. Adolescent Binge Drinking.

Alcohol Res. 2018;39(1):5-15. PMID: 30557142; PMCID: PMC6104966.

Cloninger Robert C., Sigvardsson Soren &Bohman Michael (1988), "Childhood Personality Predicts Alcohol Abuse in Young Adults", Alcoholism clinical & experimental research, Vol. 12 Issue 4, pp. 494-505.

"Drug Addiction (Substance Use Disorder)." *Mayo Clinic, Mayo Foundation for Medical Education and Research*, 4 Oct. 2022, www.mayoclinic.org/diseases-conditions/drug-addiction/symptoms-causes/syc-20365112.

- Ducci, Francesca, and David Goldman. "The genetic basis of addictive disorders." *Psychiatric Clinics of North America*, vol. 35, no. 2, 2012, pp. 495–519, https://doi.org/10.1016/j.psc.2012.03.010.
- Esmaeelzadeh S, Moraros J, Thorpe L, Bird Y. The association between depression, anxiety and substance use among Canadian post-secondary students. Neuropsychiatr Dis Treat. 2018 Nov 23;14:3241-3251. doi: 10.2147/NDT.S187419. PMID: 30538482; PMCID: PMC6260190.
- Evangelia Argyriou, MijiUm&Claire Carron (2018), "Age and impulsive behavior in drug addiction: A review of past research and future directions", Pharmacology Biochemistry and Behavior, Volume 164, pp. 106-117.
- Fiona J. Charlson ,Sandra, Diminic,Crick Lund & et al (2014), "Mental and substance use disorders in sub-saharan Africa: predictions of epidemiological changes and mental health workforce requirements for the next 40 years". Plos One, Vol. 9 No. 10. https://doi.org/10.1371/journal.pone.0110208.
- Florence Baingana, Mustafa al Absi, Anne E. Becker& et al (2015), "Global research challenges and opportunities for mental health and substance-use disorders", Nature, Vol. 527, pp. S172-S177.
- Garey, Lorra&Olofsson, Hannah & Garza, Tatyana & Rogers, Andrew & Redmond, Brooke &Zvolensky, Michael. (2020). Directional Effects of Anxiety and Depressive Disorders with Substance Use: a Review of Recent Prospective Research. Current Addiction Reports. 7. 10.1007/s40429-020-00321-z.
- Harold Alan Pincus, Brigitta Spaeth-Rublee& Katherine E. Watkins (2011), "The case for measuring quality in mental health and Substance Abuse Care", Health Affairs, Vol. 30 No. 4, pp. 730–736, https://doi.org/10.1377/hlthaff.2011.0268.
- Hart CL, Marvin CB, Silver R, Smith EE. Is cognitive functioning impaired in methamphetamine users? A critical review. Neuropsychopharmacology. 2012 Feb;37(3):586-608. doi: 10.1038/npp.2011.276. Epub 2011 Nov 16. PMID: 22089317; PMCID: PMC3260986.

- Hecht SS, Hatsukami DK. Smokeless tobacco and cigarette smoking: chemical mechanisms and cancer prevention. Nat Rev Cancer. 2022 Mar;22(3):143-155. doi: 10.1038/s41568-021-00423-4. Epub 2022 Jan 3. PMID: 34980891; PMCID: PMC9308447.
- Huestis, Marilyn A., et al. "Cannabis in sport." *Sports Medicine*, vol. 41, no. 11, 2011, pp. 949–966, https://doi.org/10.2165/11591430-00000000-00000.
- J. P. Mersky, J. Topitzes&A. J. Reynolds (2013), "Impacts of adverse childhood experiences on health, mental health and substance use in early adulthood: A cohort study of an urban, minority sample in the U.S.", Child Abuse & Neglect, Vol. 37 No. 11, pp. 917-925.
- James A. Cranford , Daniel Eisenberg , Alisha M. Serras (2009), "Substance use behaviours, mental health problems, and use of mental health services in a probability sample of college students", Addictive Behaviours, Vol. 34 Issue 2, pp. 134-145.
- Joel Swendsen, Kevin P. Conway, Louisa Degenhardt& et al (2010),"Mental Disorders as Risk Factors for Substance Use, Abuse and Dependence:"Results from the 10-Year Follow-up of the National Comorbidity Survey", Addiction, Vol. 105 Issue 06, pp. 1117-1128.
- Kimberly A. Houser, Steven Belenko&Pauline K. Brennan (2012), "The Effects of Mental Health and Substance Abuse Disorders on Institutional Misconduct among Female Inmates", Justice Quarterly, Vol. 29 Issue 6, pp. 799-828.
- Laura Jones & Daniel Vigo (2023), "Mental Health and Substance Abuse", Global Health Essentials, 08 September 2023, pp. 197-201.https://doi.org/10.1007/978-3-031-33851-9_29
- Laurie A.de Gracea, Camilla J.Knightb, Wendy M.Rodgersa& et al. (2017), "*Exploring the role of sport in the development of substance addiction*", Psychology of Sport and Exercise, Volume 28, pp. 46-57.
- Lisa S. Meredith, Brett A. Ewing, Bradley D. Stein& et al (2018), "Influence of mental health and alcohol or other drug use risk on adolescent reported care received in primary care settings", BMC Family Practice, Vol. 19 No. 10.https://doi.org/10.1186/s12875-017-0689-y
- Mataix-Cols, D., Isomura, K., Sidorchuk, A., Rautio, D., Ivanov, V. Z., Rück, C., Österman, S., Lichtenstein, P., Larsson, H., Kuja-Halkola, R., Chang, Z., Brickell, I., Hedman-Lagerlöf, E., & Fernández de la Cruz, L. (2023). All-Cause and Cause-Specific Mortality Among Individuals With Hypochondriasis. *JAMA psychiatry*, e234744. Advance online publication. https://doi.org/10.1001/jamapsychiatry.2023.4744
- Mehmet Hamdi Orum, Ali Kustepe&MahmutZabit Kara (2018), "Addiction profiles of patients with substance dependency living in Adiyaman province", Medicine Science, Vol. 7 No. 2, pp. 369-72.
- Meredith L. S., Ewing B. A., Stein B. D. &et al. (2018), "Influence of mental health and alcohol or other drug use risk on adolescent reported care received in primary care settings", BMC Primary Care, Vol. 19 No. 10, pp. 01-09. https://doi.org/10.1186/s12875-017-0689-y

- Mersky J.P., TopitzesJ. &Reynolds A. J. (2013), "Impacts of Adverse Childhood Experiences on Health, Mental Health, and Substance Use in Early Adulthood: A Cohort Study of an Urban, Minority Sample in the U.S." Child Abuse & Neglect, Vol. 37 No. 11, PP. 917-925.
- Mishra GA, Pimple SA, Shastri SS. An overview of the tobacco problem in India. Indian J Med Paediatr Oncol. 2012 Jul;33(3):139-45. doi: 10.4103/0971-5851.103139. PMID: 23248419; PMCID: PMC3523470.
- Natalia Jaworska, Sylvia M. L. Cox&Maria Tippler& et al. (2020), "*Extra-striatal D* 2/3 receptor availability in youth at risk for addiction", Neuropsychopharmacology, Volume 45, pp. 1498–1505
- Nora D. Volkow (2001), "Drug abuse and mental illness: Progress in understanding comorbidity", American Journal of Psychiatry, Vol. 138 No. 08, pp. 1181-1183.
- Nowinski, J.K. (1990). Substance Abuse In Adolescents And Young Adults: A Guide To Treatment.
- Osna NA, Donohue TM Jr, Kharbanda KK. Alcoholic Liver Disease: Pathogenesis and Current Management. Alcohol Res. 2017;38(2):147-161. PMID: 28988570; PMCID: PMC5513682.
- Paton, Alex. "Alcohol in the Body." *BMJ (Clinical Research Ed.)*, U.S. National Library of Medicine, 8 Jan. 2005, www.ncbi.nlm.nih.gov/pmc/articles/PMC543875/.
- Prakash, Sathya. (2013). A case of hypochondriasis with dexamethasone and pheniramine dependence. Journal of Substance Use. 20. 10.3109/14659891.2013.866180.

Richard Van Dorn, Jan Volavka&Norman Johnson (2011), "*Mental disorder and violence: Is there a relationship beyond substance use?*" Social Psychiatry and Psychiatric Epidemiology, Vol. 47, No. 3, pp. 487–503, https://doi.org/10.1007/s00127-011-0356-x.

- Robert E. Drake, Carolyn Mercer McFadden, Kim T. Mueser& et al (1998), "*Review of integrated mental health and substance abuse treatment for patients with dual disorders*", *Schizophrenia Bulletin*, Vol. 24, Issue 4, pp. 589–608.
- Seth J. Schwartz, Jennifer B. Unger, Lourdes BaezcondeGarbanati& et al (2015), "Trajectories of cultural stressors and effects on mental health and substance use among hispanic immigrant adolescents", Journal of adolescent health, Vol. 56 No. 04, pp. 433-439.
- Scarella, T. M., Laferton, J. A., Ahern, D. K., Fallon, B. A., & Barsky, A. (2016). The Relationship of Hypochondriasis to Anxiety, Depressive, and somatoform disorders. *Psychosomatics*, 57(2), 200–207. https://doi.org/10.1016/j.psym.2015.10.006
- Sirri, L., Ricci Garotti, M. G., Grandi, S., &Tossani, E. (2015). Adolescents' hypochondriacal fears and beliefs: Relationship with demographic features, psychological distress, well-being and health-related behaviors. *Journal of psychosomatic* research, 79(4), 259–264. https://doi.org/10.1016/j.jpsychores.2015.07.002

- Stefano Tartaglia, Anna Miglietta & Silvia Gattino (2017), "Life Satisfaction and Cannabis Use: A Study on Young Adults", Journal of Happiness Studies, Volume 18, pp. 709–718.
- Sullivan EV, Harris RA, Pfefferbaum A. Alcohol's effects on brain and behavior. Alcohol Res Health. 2010;33(1-2):127-43. PMID: 23579943; PMCID: PMC3625995.
- Sussman, S., & Ames, S. (2008). Concepts of Drugs, Drug Use, Misuse, and Abuse. In Drug Abuse: Concepts, Prevention, and
- Tega Y, Yamazaki Y, Akanuma SI, Kubo Y, Hosoya KI. Impact of Nicotine Transport across the Blood-Brain Barrier: Carrier-Mediated Transport of Nicotine and Interaction with Central Nervous System Drugs. Biol Pharm Bull. 2018;41(9):1330-1336. doi: 10.1248/bpb.b18-00134. PMID: 30175770.
- Wadgave U, Nagesh L. Nicotine Replacement Therapy: An Overview. Int J Health Sci (Qassim). 2016 Jul;10(3):425-35. PMID: 27610066; PMCID: PMC5003586.

"Warning Signs and Risk Factors for Emotional Distress." *SAMHSA*, www.samhsa.gov/find-help/disaster-distress-helpline/warning-signs-risk-factors. Accessed 7 Nov. 2023.

- Walkup James, Blank Michael B., Gonzalez Jeffrey S. & et al (2008), "The impact of mental health and substance abuse factors on HIV prevention and treatment", JAIDS Journal of Acquired Immune Deficiency Syndromes, Vol. 47 No. 1, pp. S15-S19.
- Weitzman Elissa R. (2004), "Poor Mental Health, Depression, and Associations with Alcohol Consumption, Harm, and Abuse in a National Sample of Young Adults in College", the Journal of Nervous and Mental Disease, Vol. 192 No. 4, pp. 269-277.
- Zhiwei Zhang, Alycia Infante, Michael Meit& et al (2008), "An Analysis of Mental Health and Substance Abuse Disparities & Access to Treatment Services in the Appalachian Region", Final Report. National Opinion Research Center, University of Chicago, USA.

Website

https://dictionary.apa.org/addiction

https://www.apa.org/topics/substance-use-abuse-addiction

https://www.simplypsychology.org/whatispsychology.html

https://www.simplypsychology.org/whatispsychology.html

https://www.cs.mcgill.ca/~rwest/wikispeedia/wpcd/wp/g/Geography_of_India.htm